

# REPORT ON BOILERS.

No. 10742.

DEC 10 1938.

Received at London Office

Date of writing Report 29/11

1938

When handed in at Local Office

19

Port of Copenhagen

No. in Survey held at Copenhagen & Odense

Date, First Survey 18<sup>th</sup> February

Last Survey 24<sup>th</sup> November 1938

364 on the Single Se. Motor Vessel "HULDA MÆRSK."

(Number of Visits 21)

Gross 5601  
Tons Net 3390

built at Odense

By whom built L. Odense Staalværk

Yard No. 75

When built 1938

Engines made at Copenhagen

By whom made H. B. Bunkers & Sønner  
H. B. Bunkers & Sønner

Engine No. 2834

When made 1938

Boilers made at

By whom made

Boiler No.

When made

Boilers 2 1/2 "Sundberg" of "1912 2 1/2"

Port belonging to Copenhagen

## VERTICAL DONKEY BOILER.

made at Copenhagen

By whom made L. Sundberg & Sønner

Boiler No. 717

When made 1938

Where fixed in the engine room

Manufacturers of Steel Plates: R. B. Bunkers & Sønner, Rind: - L. B. Bunkers & Sønner, Copenhagen.

Heating Surface of Boiler 70 m<sup>2</sup> 75.5 sq ft

Is forced draught fitted yes

Coal or Oil fired oil

Description of Boilers one of vertical, multitubular

Working pressure 100 lbs/p.

Tested by hydraulic pressure to 200 lbs/p.

Date of test 27.7.38

No. of Certificate 627

No. of Firegrate in each Boiler

No. and Description of safety valves to each boiler 2 off direct spring loaded 7 1/2" diam

No. of each set of valves per boiler { per rule 5300 w/m<sup>2</sup>  
as fitted 8800 w/m<sup>2</sup>

Pressure to which they are adjusted 100 lbs

Are they fitted with easing gear yes

Whether steam from main boilers can enter the donkey boiler no

Smallest distance between boiler or uptake and bunkers

Is oil fuel carried in the double bottom under boiler yes

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated yes

Largest internal dia. of boiler 2600 w/m Height 4981 w/m

Material S. S. Steel

Tensile strength 44/50 kg/mm<sup>2</sup>

Thickness 13-17, 19 w/m

Are the shell plates welded or flanged no

Description of riveting: circ. seams { end single  
inter single

266 rivets

No. of rivet holes in { circ. seams 205 w/m  
long. seams 205 w/m

Pitch of rivets 49 w/m  
98 w/m

Percentage of strength of circ. seams { plate 58.2  
rivets 42.3

of Longitudinal joint { plate 79  
rivets 101  
combined 91.7

Working pressure of shell by rules 7.94 kg/cm<sup>2</sup>

Thickness of butt straps { outer 13 w/m  
inner 13 w/m

Crown: Whether complete hemisphere, dished partial spherical, or flat dished

Material S. S. Steel

Working pressure 41/47 kg/mm<sup>2</sup>

Thickness 20 w/m

Radius 2080 w/m

Working pressure by rules 8.1 kg/cm<sup>2</sup>

Description of Furnace: Plain, spherical, or dished crown spherical

Material S. S. Steel

Tensile strength 41/47 kg/mm<sup>2</sup>

External diameter { top 1860 w/m  
bottom 2472 w/m

Length as per rule 760 w/m

Working pressure by rules 8.7 kg/cm<sup>2</sup>

Are support stays circumferentially

and vertically

Are stays fitted with nuts or riveted over

Number of stays over thread

Radius of spherical or dished furnace crown

Working pressure by rule

Thickness of Stay Ring

64 w/m

Diameter as per rule { D 2600 w/m  
A 2472 w/m

Working pressure by rule

Combustion Chamber: Material

Tensile strength

Thickness of top plate

Is it dished

Working pressure by rule

Thickness of back plate

Diameter if circular

As per rule

Pitch of stays

Are stays fitted with nuts or riveted over

Number of stays over thread

Working pressure of back plate by rules

Plates: Material

S. S. Steel

Tensile strength 41/47 kg/mm<sup>2</sup>

Thickness 19 w/m

Mean pitch of stay tubes in nests 280 w/m

Working shell, Dia. as per rule

front 2500 w/m  
back 2500 w/m

Pitch in outer vertical rows 200 w/m

Dia. of tube holes FRONT

stay 95 w/m  
plain 92 w/m

BACK

stay 89 w/m  
plain 89 w/m

Alternate tube in outer vertical rows a stay tube all stay tubes

Working pressure by rules { front 7.5 kg/cm<sup>2</sup>  
back 7.5 kg/cm<sup>2</sup>

Stays to combustion chamber tops: Material

Tensile strength

Length and thickness of girder at centre

Length as per rule

Stays apart

No. and pitch of stays in each

Working pressure by rule

006160-006174-0051

© 2020

Lloyd's Register  
Foundation



**Crown stays:** Material ☒ Tensile strength ☒ Diameter ☒ at body of stay or over threads ☒  
 No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by rules ☒  
**Screw stays:** Material ☒ Tensile strength ☒ Diameter ☒ at turned off part or over threads ☒ No. of threads per inch ☒  
 Area supported by each stay ☒ Working pressure by rules ☒ Are the stays drilled at the outer ends ☒  
**Tubes:** Material S. M. Steel External diameter ☒ plain 89 mm Thickness 1/4" - 6.35  
 No. of threads per inch 11 Pitch of tubes 200 x 120 mm Working pressure by rules 8.5 kg/cm<sup>2</sup>  
**Manhole Compensation:** Size of opening in shell plate 320 x 420 mm Section of compensating ring flat 20 mm thick  
 of rivet holes 40 of 20.5 mm Outer row rivet pitch at ends 100 mm Depth of flange if manhole flanged ☒  
**Uptake:** External diameter ☒ Thickness of uptake plate ☒  
**Cross Tubes:** No. ☒ External diameters ☒ Thickness of plates ☒

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes  
 The foregoing is a correct description,

ARTIESELKABET  
 SMITH, MYGIND & HUTTEMEIER  
 Manufact

Dates of Survey ☒ During progress of work in shops - 18/12-24/12-29/12-5/1-22/1-23/1-1/2-4/2-14/2-18/2-27/2-1938 the approved plan of boiler forwarded herewith (If not state date of approval.)  
☒ During erection on board vessel - 4/2-27/2-11/3-17/3-24/3-2/4-4/4-24/4-1938 Total No. of visits 21

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed and fitted on board the vessel under special survey in accordance with the Rules, the approved plans and the Secretary's letter. The material used in construction has been tested as required by the Rules and the workmanship is good.

Survey Fee ... Fr. 94.08 When applied for, 9.12.38  
 Travelling Expenses (if any) Fr. 2.50 When received, 16.1.39

Committee's Minute TUE 31 JAN 1939  
 Assigned See FE, machy, rpl.

J. Langhien  
 Engineer Surveyor to Lloyd's Register of Shipping